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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,480	12/28/2000	Mitchell R. Swartz		7970
7590	01/13/2004		EXAMINER	
Mitchell R. Swartz, ScD, EE, MD 16 Pembroke Road Weston, MA 02493			PALABRICA, RICARDO J	
			ART UNIT	PAPER NUMBER
			3641	

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/750,480	SWARTZ, MITCHELL R.	
	Examiner	Art Unit	
	Rick Palabrida	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 28 November 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-20 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a)  The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1)  Notice of References Cited (PTO-892)

2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11

4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's 11/28/03 amendment , which revises claim 14, is acknowledged. This amendment is in response to the 07/09/03 Office Action.
2. Applicant's arguments traversing the rejection of have been fully considered but they are not persuasive because they can be best characterized, for example, as follows:
  - Irrelevant (e.g., alleging that new matter in the disclosure is the result of the election requirement of the Examiner of parent application).
  - Improper interpretation (e.g., alleging that hydrogen loading is not new matter because it is a subject discussed extensively in cited literature)
  - Recycling of old arguments that have no merit (e.g., Examiner could not have found prior art if the invention was indefinite)
  - Recycling of arguments previously rejected in denied petitions (e.g., Examiner is forcing Applicant into double patenting)
  - Inconsistency with factual information (e.g., changes in the specification respond to and fully comply with Federal Appellate Decision 00-1107)
  - Improper definition of terms (e.g., applicant appears to define "skilled-in the art" as declarants, affiants and Amicus Curiae who agree with him but excludes those with contrary opinion)
  - Reliance on features not recited in rejected claims (e.g., additional electric field and orthogonal magnetic field)

- Failure to establish relevance of documents to current application (e.g., Mallove declaration)
- Unprofessional derogatory comments on legitimate, technical issues raised by the examiner (e.g., "Examiner appears not to be familiar with calculus", "Examiner is referred to any elementary calculus book so he may understand what is well known to any qualified engineer, and any scientist well-trained", etc.).  
The applicant has been warned by the Director, TC3600, regarding the conduct of business with the Office, as outlined in 37 CFR 1.3, which states, "Applicants and their attorneys or agents are required to conduct their business with the Patent and Trademark Office with decorum and courtesy" (see 5/1/02 Decision on Petition under 37 CFR 1.181 on Applicant's S/N 09/750,480).

**The Examiner puts the applicant on notice, as part of the record of this application, that the above statements are a violation of 37 CFR 1.3.**

3. On the issue of new matter, the Examiner identified examples of differences between the parent application (S/N 07/371,937) and the current application. Applicant's argument that the new matter was the result of the restriction requirement made by a previous Examiner is irrelevant. The issue is whether or not there is new matter in the current application. Also, applicant himself admits, for example, that the term, "loading", in the current application has a different meaning than the term, "electrochemically nuclear fusion" in the parent application (see page 8 of 11/28/03 Amendment).

Therefore, the current application does not qualify as a continuation of the parent and is only entitled to the priority of its filing date of **12/28/2000**. Accordingly, the Examiner will address only those substantive items of the traverse that are consistent with the 12/28/2000 filing date.

4. Applicant traversed the rejection of claims under 35 U.S.C. 112, first paragraph, applicant on the grounds that: a) the claims are directly from the original specification (i.e. parent), and the scope and wording of the claims maintain the wording and scope of the original disclosure and claims; and b) the claims comply with the Federal Decision 00-1107 in the parent of the instant application. The Examiner disagrees because in its decision in 00-1107, the Board affirmed the rejection of the claims in the parent application for lack of enablement and utility. The Board concluded that the applicant "had not provided an enabling specification such that one of ordinary skill in the art could conduct the claimed cold fusion process without undue experimentation." (see page 14 of 00-1107).

5. Applicant also traversed the Examiner's statement that he has presented neither a working example nor description of an operating embodiment nor specific direction or guidance as to how to achieve the claimed results.

Applicant cites the specification of the parent case, S/N 07/371,937, as proof that he has an operating embodiment. To the contrary, the Board in Federal Decision 00-

1107 clearly stated that there is "complete absence of working examples in Swartz's specification" (see page 14 of 00-1107).

Applicant cites declarations that allegedly demonstrate proof of operability and enablement. The submitted declarations have been fully considered but found unconvincing because of one or more of the following reasons:

- a) They appear mainly directed to opinions and conclusions unsupported by facts (e.g., Ahern, Kurzweil, Miles, Rotegard and Storms). See *In re Pike et al.*, 84 USPQ 235. No weight is given to an opinion declaration on the ultimate legal conclusion in issue. See *In re Lindell*, 155 USPQ 251.
- b) They are not relevant to the technical subject of the application, e.g., Verner, Fox, Bass that pertain more to complaints about the Patent Office, and Chubb, Ahern, Mallove and Fox that pertain to loading and not to excess heat generation in the claimed invention.
- c) They were submitted in support of a different application, have been previously considered on appeal, and applicant's petition denied (e.g., Mallove, Verner, and Strauss). Additionally, the applicant did not establish the relevance of these declarations to the current application.
- d) They deal with issues in the cold fusion area that have since been either discredited, abandoned, found defective or else overtaken by events (e.g., Mallove on the Japanese cold fusion research).
- e) They do not appear to have been declarations of disinterested parties (e.g., Swartz, Rotegard).

As to the ICCF-10 press releases cited by the Applicant, he has not established any identical relationship between the apparatus described therein and his claimed invention.

6. As to the issue of indefiniteness of the claims, applicant again alleges that the federal court [In re Swartz 00-1107] had no trouble understanding the invention in the parent application. To the contrary, the Board affirmed the rejection for indefiniteness of the claims, and even observed that the applicant "throughout his appeal, had failed to make specific and substantial arguments against the rejection (see page 13 of 00-1107).

7. Applicant's arguments traversing the rejection of claims 1, 3-7 as being anticipated by Masaaki have been fully considered but they are not persuasive because features upon which the applicant relies are not recited in rejected claims. Examples of said features are the following:

- Use of fixed frequency instead of a single pulse
- Optical irradiator subsystem, optical detection subsystem, optical lenses, beam splitters
- Transparent windows
- Additional electric field and orthogonal magnetic field

Applicant also alleges that there is no loading in Masaaki's apparatus. The applicant disagrees because Masaaki discloses a palladium electrode and an

electrolyte of deuterium. It is a well-known scientific fact that palladium absorbs deuterium, i.e., loaded inside the metal.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Additionally, if said unrecited features are considered by the applicant to be critical to his invention, then such omission would amount to a gap between the essential elements. In this case, the claim(s) would be incomplete and would be rejected under 35 U.S.C. 112, second paragraph. See MPEP § 2172.01.

8. Applicant arguments traversing the use of Wang, Steinlechner or Zang to reject claims 8-20 have been fully considered but they are not persuasive. Applicant has not shown that the references do not teach what the examiner has stated they teach, nor, has the applicant shown that the examiner's reasoning for and manner of combining the teachings of the references is improper or invalid.

Applicant alleges that Wang, Steinlechner or Zang do not disclose the features of the invention. These three references are secondary references that are applied to modify the primary reference, Masaaki. A secondary reference does not have to show all the features of the claimed invention.

Masaaki discloses an oscillating drive that facilitates fine-tuning of frequency of vibration. Knowledge of such frequency is necessary, e.g., to facilitate repeatability of operating conditions and results. Any one of the secondary references can provide the teaching for measurement of said frequency.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicant states on page 4 of the specification that the process of loading is complicated, and the changes of deuterium loading into palladium is difficult because "the rate of desired reactions is very low." However, the applicant presents neither working examples nor description of an operating embodiment nor specific direction or guidance as to how to achieve the claimed results. Thus, although the applicant acknowledges that the process is complicated and difficult to monitor, he treats the process as though it is well known and readily reproducible. This paucity of information necessary for the exercise of the claimed invention is discussed in detail below.

On page 7, 1<sup>st</sup> paragraph, the applicant states that a mechanical system enables the cathode to vibrate between displacements. There is neither a written description nor enabling disclosure of this mechanical system.

(Applicant's arguments in his traverse have been fully considered but found unconvincing. As presently set forth, the electrical power system (box 50 in Fig. 1), the optical irradiator subsystem (box 30 in Fig. 1), the optical detection subsystem (box 31 in Fig. 1), the central control unit (box 23 in Fig. 1) and the power source (box 42 in Fig. 1) are essentially "black boxes" with no description of the internals thereof. Applicant has not shown where the specifics of the internals of the "black boxes" are described in the cited publications).

On page 8, 2<sup>nd</sup> paragraph, the applicant discloses the reaction cell in Fig. 2. The disclosure is insufficient as to conditions existing inside the cell (e.g., pressure and temperature conditions). The disclosure is also insufficient as to how and in what manner these conditions are maintained, e.g., how the temperature is maintained at a given range. The disclosure is also insufficient as to ratio of the different masses involved, i.e., ratio of the thickness of "springy material" 13 to the thickness of cathode 1, ratio of mass 11 to the mass of cathode 1, ratio of three masses to each other, etc.

(Applicant's reply is unresponsive. The above remark refers to lack of disclosure of parameters for an operating embodiment, which embodiment has not been proven to exist by the applicant).

On page 10, line 5 of the specification, the applicant provides an unnumbered equation of motion. The disclosure is insufficient as to how and in what manner the

values of the constants, k and b, are evaluated, and what approximations, if any, are used in their evaluation.

(Applicant's reply is unresponsive. The Examiner was not referring to how to theoretically solve the equation, but how to determine the constants in an actual operative embodiment that the applicant has not proven to exist).

There is neither an adequate description nor enabling disclosure of the parameters of a specific operative embodiment of the invention, including the exact composition of the electrolyte (including impurities and amounts thereof), atomic or weight ratio of metal electrodes to electrolyte, dimensional ratio of electrodes to their spacing (i.e., sizes of anode and cathode relative to the space between them), surface area-to-volume requirement for the reactor, ratio of masses 1, 11 and 13 to each other, thickness ratio of the "springy material" 13 to cathode 1, required magnetic strength of coil 41, distance between the coil and the cell, length of time the process has to carried out, pressure and temperature conditions inside the reaction cell and how these conditions are maintained within a given range, mechanical means to support the cathode at a pivot point, etc.

(Applicant's arguments in his traverse have been fully considered but found unconvincing. Applicant has not incorporated by reference the applications that allegedly contain the above subject matter).

Claim 1 recites a "process for producing a product using a material which is electrically loaded with a second material. The disclosure is insufficient as what exactly is this so-called "product."

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 8 and 17 recite the limitation, "mechanically coupling said material." The claims are vague, indefinite and incomplete as to what the material is coupled to.

Claims 1 and 10 recite the limitation, "providing means to follow the frequency of said vibration." The claims are vague and indefinite as to what is meant by the term, "to follow."

(Applicant alleges that the Examiner of the parent application understood the invention and therefore there is no indefiniteness. The current Examiner disagrees. Each patent application (and its accompanying claims) are treated on their own merits. See particularly MPEP 811.04, which states:

"Even though inventions are grouped together in a requirement in a parent application, restriction or election among the inventions may be required in the divisional applications, if proper."

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention as disclosed is inoperative and therefore lacks utility.

The reasons that the inventions as disclosed is inoperative are the same as the reasons set forth in sections 3 and 4 above and the reasons set forth in sections 3 and 4 above are accordingly incorporated herein.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by JP-06-018683. This reference discloses a vibrating electrode apparatus for room temperature fusion comprising a palladium cathode that is resonantly vibrated. The vibrating cathode is electrochemically loaded with deuterium from an electrolyte containing said hydrogen isotope.

Applicant's claim language reads on the figures in JP-06-018683 as follows: a) "means to drive vibration" reads on line winding 10; b) "means to follow the frequency of vibration" reads on RF generator 11 that sets (i.e., "follows") the vibration frequency; c) "second mass" reads on structure that is coupled to the vibrating cathode at its exterior.

***Claim Rejections - 35 USC § 103***

7. Claims 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-06-018683 in view of any one of Wang et al. (U.S. 5,495,767), Steinlecher et al. (U.S. 5,883,715) or Zang et al. (U.S. 5,838,439). JP-06-018683 discloses the applicant's claims except for the laser measurement of the vibration frequency of the cathode.

Anyone of Wang et al., Steinlecher et al., or Zang et al. disclose a laser vibrometer for remotely measuring the vibration frequency of an object.

JP-06-018683 discloses an oscillating drive that facilitates fine-tuning of frequency of vibration. Knowledge of such frequency is necessary, e.g., to facilitate repeatability of operating conditions and results. Any one of the secondary references can provide the teaching for measurement of said frequency.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus, as disclosed by JP-06-018683, by the teaching of any one of Wang et al., Steinlecher et al., or Zang et al. to include a laser vibrometer to gain the advantages thereof (i.e., precise frequency information), because such modification is no more than the use of well known expedient for measuring vibration frequency within the art.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3641

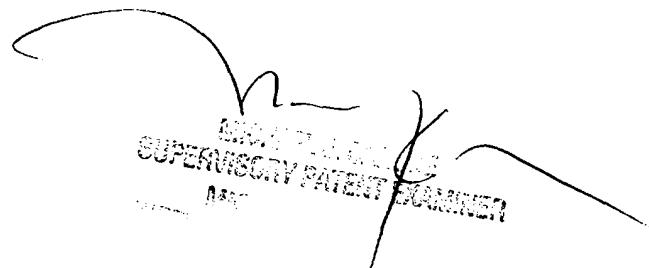
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

RJP  
January 8, 2004



A handwritten signature in black ink, appearing to read "RICK PALABRICA", is written over a stylized, swooping line. Below the signature, the text "U.S. PATENT AND TRADEMARK OFFICE" and "SUPERVISORY PATENT EXAMINER" is printed in a smaller, bold, sans-serif font.